## **Description of Additional Supplementary Files**

File Name: Supplementary Data 1

Description: Cell number and UMI information of each cluster and patient.

File Name: Supplementary Data 2

Description: Differentially expressed genes in NK, T, B, myeloid, and malignant cells

File Name: Supplementary Data 3

Description: Signature score related genes.

File Name: Supplementary Data 4

Description: TCR information of T cells in NPC.

File Name: Supplementary Data 5

Description: Transcription factors regulatory network in LAMP3<sup>+</sup> DCs.

File Name: Supplementary Data 6

Description: Significant ligand-receptor interaction pairs between cell types in NPC.

File Name: Supplementary Data 7

Description: Description: Cluster signature genes (Top Rank 200).